



REPLACEMENT SHEET

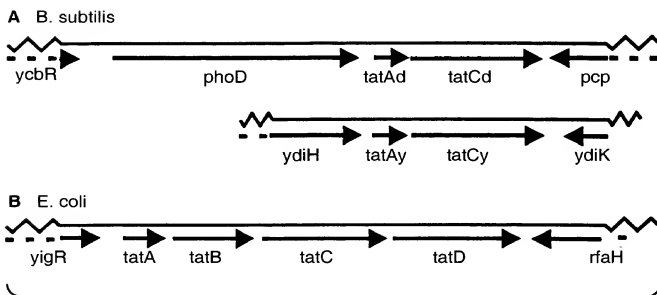
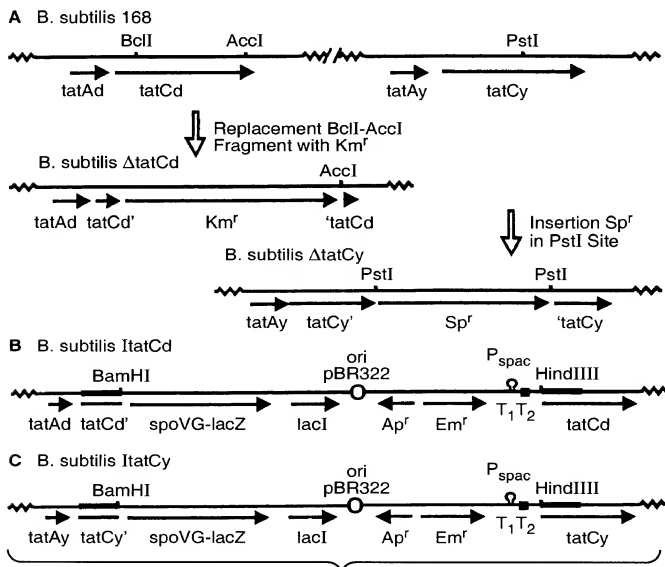
1 / 11

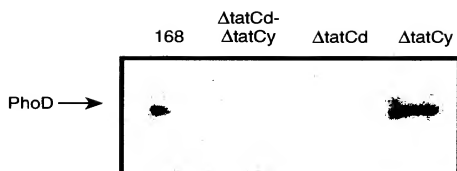
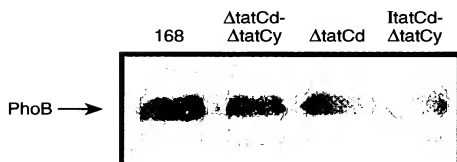
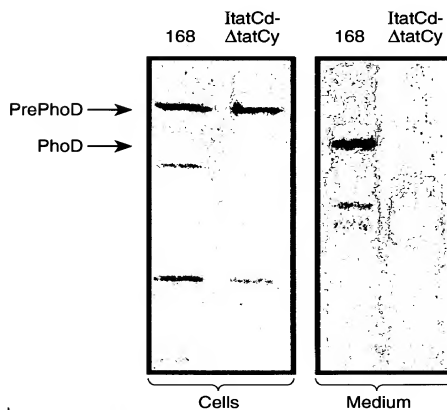
TatA (Eco)	M- <u>GGISIWQLLIIAVIVVLLFGTKKL</u> G-----	26
TatE (Eco)	M- <u>GEISITKLLVVAALVLLFGTKKL</u> R-----	26
TatAy (Bsu)	<u>M</u> - <u>PIGPGSLAVIAIIVALIIFGPKKL</u> P-----	25
TatAd (Bsu)	<u>M</u> FSNIGIPGLILIFVIAIIIFGPK <u>KL</u> P-----	27
TatAc (Bsu)	<u>M</u> - <u>ELSFTRKILVILFVGFVFGPKKL</u> P-----	25
TatB (Eco)	<u>M</u> <u>B</u> - <u>DIGFSELLVFIIGLVVLG</u> QRLPVAVKTVAGWIRALRSLATTVQNELTQELKQ	49
	* *	
TatA (Eco)	-----SIGSDLGASIKGFKKAMSDE-----	PKQDKTSQDADFTAKTI 64
TatE (Eco)	-----TLGGDLGAAIKGFKKAMNDD-----	A-AAKGADVDLQAEKL 63
TatAy (Bsu)	-----ELGKAAGDTLREFKNATKGLT-----	SDEEEKKEDQ----- 57
TatAd (Bsu)	-----EIGRAAKRTLLEFKSATKSLV-----	SGDEKEKS AELTAVK- 64
TatAc (Bsu)	-----ALGRAAGKALSEFKQATSGLT-----	QDIRKNDSEN-----K- 57
TatB (Eco)	EFQDSLKKVEKASLTNTPELKASMDLRQAESMKRSYVANDPEKASDEAHTIHP	114
 *	
TatA (Eco)	ADKQADTNQE-----	-QARTEDAKRHDEKQV 89
TatE (Eco)	SHKE-----	67
TatAy (Bsu)	-----	57
TatAd (Bsu)	-----	-QDKNAG 70
TatAc (Bsu)	-----	-EDQM- 62
TatB (Eco)	VVKDNEAAHEGVTPAAAGTQASSPEQKPETTPEPVVKPAADAEPKTAAPSPSSSDKP	171

FIG. 1A

TatC (Eco)	MSVEDTQ--PLITHLIELRR <u>LLNCIIAVIVIFLCLVYFAN</u> DIYH-LVSAPLIK	51
TatCy (Bsu)	MTRMKVNQMSLLEHIAELRK <u>LL</u> IVALAFVVFIFAGFFLAKPIIIVYLQETDEAK	50
TatCd (Bsu)	MDKKETH--LIGHLEELRR <u>RI</u> IVTLAAFFLFLITAFLFVQDIYDWLIRDLDGK	51
	* . . . * . . . * . . . * . . . *	
TatC (Eco)	QLPQGSTMIATDVASFPFF <u>TKLTFMVSLILSAPVILYQVVA</u> FIAPALYKHERR	105
TatCy (Bsu)	QL--TLNAPNLTDPLVFMQFAFIIGIVLTPSPVILYQLWAFVSPGLYEKERK	104
TatCd (Bsu)	-----LAVLGPSEILWVVMMLSGICAIAASIPVNAVQLWRRVAPALTTERK	98
 * . . . * . . . * . . . *	
TatC (Eco)	LVVPLLV--SSSLFYIGMAFAYFVVFPLAFGLANTAPE-GVQVSTD <u>LASYL</u>	155
TatCy (Bsu)	VTLSYI--FVSILLFAGLSFSYIILFPFVDFMKRISQDLNVNQVIGINEYF	155
TatCd (Bsu)	VTIMYIMYIPGLFALFLAGISFGYFVLFPIVLSFLTHLSSG-HFETMFTADRYF	151
 * . . . * . . . * . . . *	
TatC (Eco)	SFVMALFMAFGVSEFVPVAIVLLCWMGITSPEDLRKKRPVYLVGAFVVGMLLTP	209
TatCy (Bsu)	HFLLQLTTPFGLLQPMVILMFLTRLGIPTFMFLAKIRRYAYFTLLVIALITP	209
TatCd (Bsu)	RFMVNLSLFPFGFLFEMPLVVMFLTRLGLILNRYRLAKAKLSYFLLIVVSILITP	205
	* . . . * . . . * . . . * . . . *	
TatC (Eco)	PDVFSQTLAIPMYCLFEIGVFFSRF-YVKGGRNREEENDAEASEKTE	258
TatCy (Bsu)	PVLLSHMVMVTYLLYEISILISKAAAYRKAQKSSAADRDVSSG-----Q	254
TatCd (Bsu)	PDFISDFLVMIPLLVLFEVSVTLSAFVYKKRMRE-----ETAAA-----A	245
	* . . . * . . . * . . . * . . . *	

FIG. 1B

**FIG. 2****FIG. 3**

**FIG. 4A****FIG. 4B****FIG. 4C**

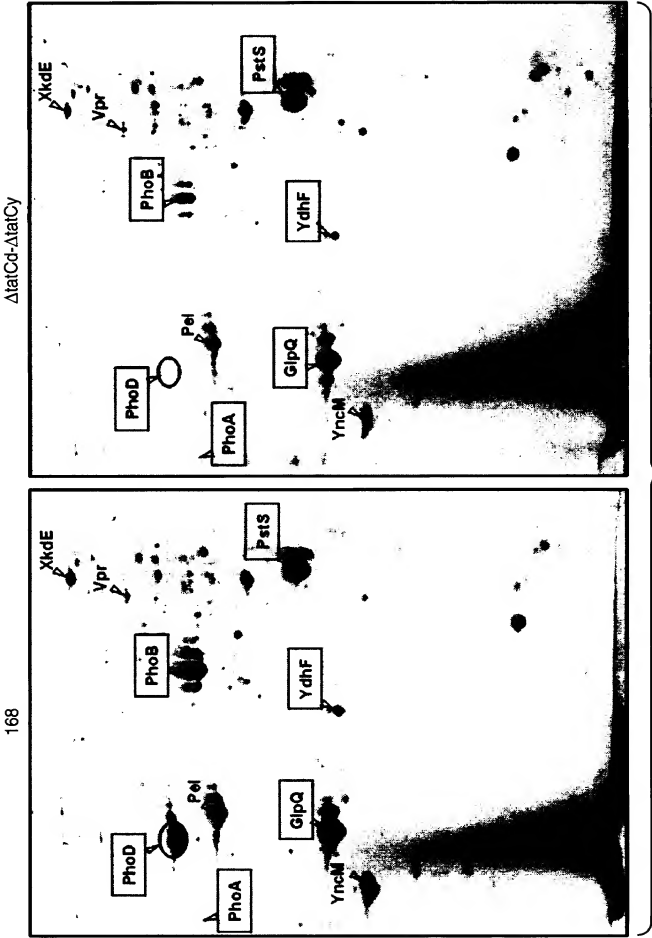
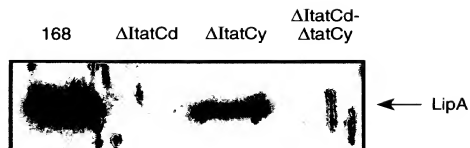
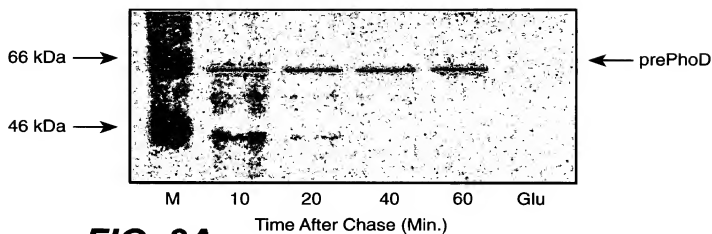
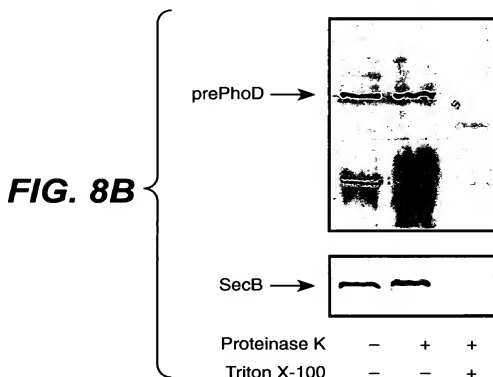


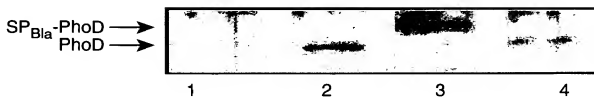
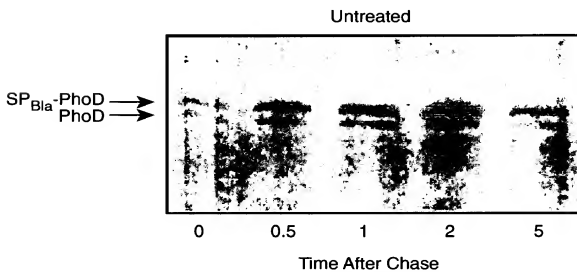
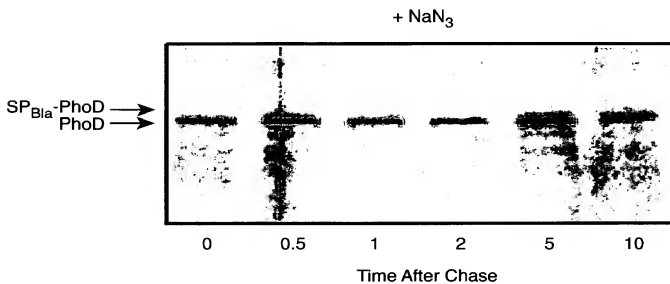
FIG. 5

**FIG. 6**

Protein	N	h	RR-Motif	H	h	C
AlbB	1	0.1	RRILL	27	2.0	AIA
AmyX TM	9	-0.8	RRSFE	15	1.1	-
AppB TM	8	0.5	RRTLM	19	2.3	-
LipA	7	-1.1	RRITA	19	1.2	AKA
OppB TM	8	-0.6	RRLVY	24	2.0	-
PbpX	2	-2.2	RRRKL	14	2.9	WNA
PhoD	3	-1.3	RRKFI	17	0.9	VGA
QcrA TM	1	-1.1	RRQFL	19	1.3	-
TlpA TM	1	-0.8	RRLII	21	2.4	-
WapA ^W	1	-3.0	RRNFK	18	2.3	VLA
WprA	8	-1.7	RRKFS	20	1.9	AAA
YceA TM	1	-0.4	RR AFL	21	2.2	-
YesM TM	1	-1.5	RRMKI	20	2.4	QYA
YesW	1	-1.3	RRSCL	19	2.0	VKA
YfkN TM	1	-1.2	RRTHV	17	1.7	IHA
YkpC	8	-1.0	RRVAI	17	2.3	SLA
YkuE	1	-1.3	RRQFL	17	1.0	GYA
YmaC	7	0.0	RRFLL	15	2.4	YSL
YubF TM	9	-2.7	RRNTV	23	2.0	-
YuiC	8	0.2	RRLLM	20	1.9	IEA
YvhJ TM	2	-1.7	RRKIL	18	2.5	-
YwbN	1	-1.8	RRDIL	23	1.4	QTA

FIG. 7

**FIG. 8A****FIG. 8B**

**FIG. 9A****FIG. 9B****FIG. 9C**

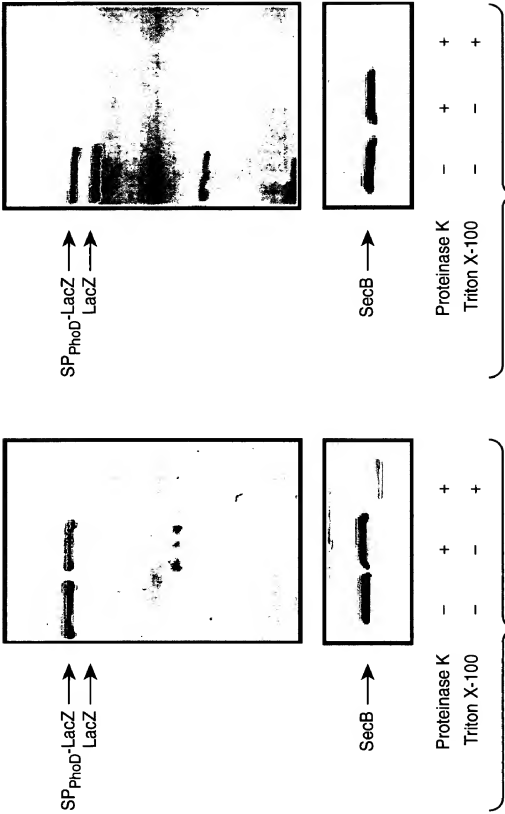


FIG. 10B

FIG. 10A

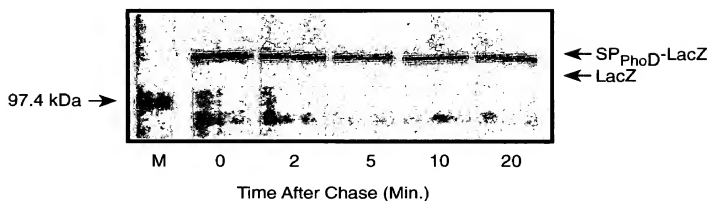


FIG. 11A

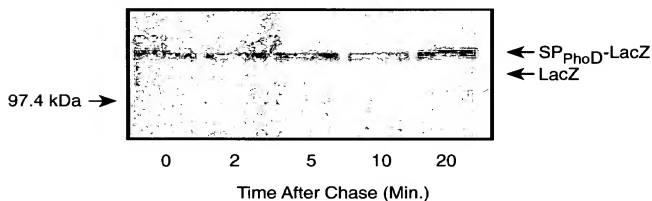
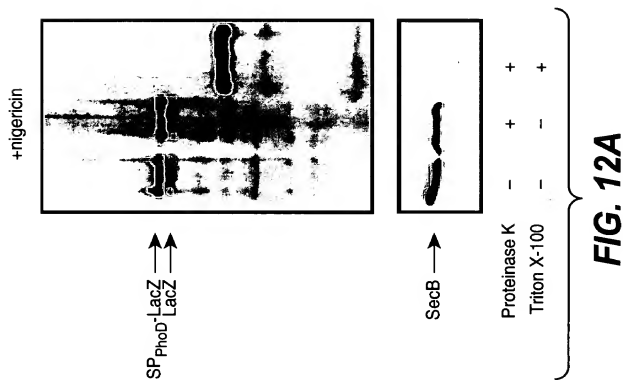
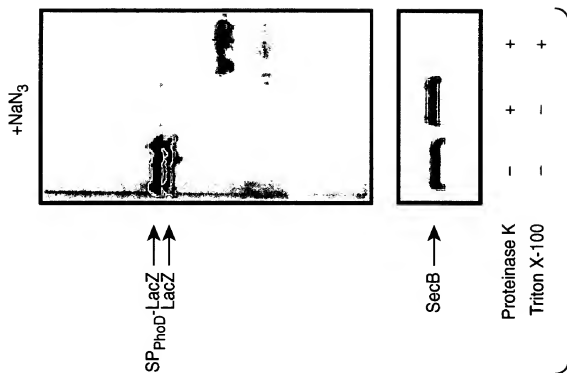
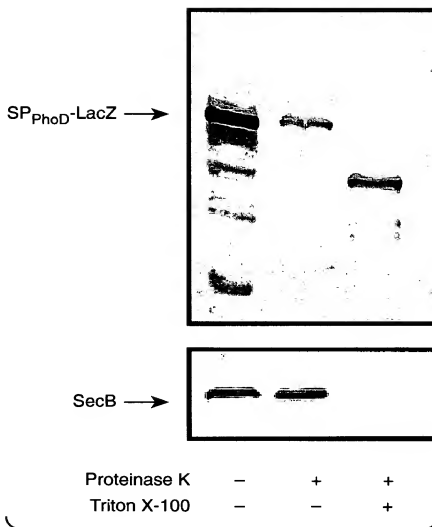


FIG. 11B



**FIG. 13**

Homologs in *B. alcalophilus*

TatA

MGGLSVGSVVLI~~AL~~VALLIFGPKKLPELGKAAGSTLREFKNATK
GLADDDDDTKSTNVQKEKA

TatC

MTMTPNQQTSSKKKKRKG~~RG~~RVPMQDMSIMDHAEELRRRIF
VVLAF~~F~~IVALIGGFFLAVPVITFLQNSPQAADMPFNAFRLTDPLRV
YMNFAVITALVLIIPVILYQLWAFVSPGLKENEQKATLAYIPIAFL
LFLAGIAFSYFILLPFVISFMGQMADRLEINEMYGINEYFSFLFQL
TIPFGLLFQLPVVVMFLTRLGVVTP~~T~~FLRKIRKYAYFALLVIAGII
TPPELTSHL~~F~~VTVPMILLYEISITISAITYRK~~Y~~HGTTDHNGQESAK

FIG. 14